

Towards Equitable Quality Basic Education in Uganda: Insights from Uwezo Learning Assessment Data

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Abstract

The main rationale for the Education for All (EFA) movement and the Millennium Development Goal of achieving Universal Primary Education (UPE) by the year 2015 were premised on the belief that education is a channel of development. Provision of basic primary education for all was and is still regarded as critical in poverty reduction and as a tool to address inequality in society. This paper embraces an outcomes analysis of education attainments in Uganda to examine the strengths and weaknesses of EFA towards narrowing inequality and inequity gaps in the provision of basic education in Uganda. The paper draws from an analysis of data of Uwezo - an initiative that tracks learning outcomes of children aged 6-16 across East Africa (Uganda, Kenya and Tanzania). In Uganda, large scale assessment of learning outcomes has been undertaken since 2011 at household level across 80 districts in the country using primary two literacy and numeracy tasks. In this paper an analysis of the 2013 Uwezo Uganda dataset is undertaken to establish learning outcomes at national and regional level. Drawing from the findings of the analysis, the paper argues that EFA, in its current form, is far from serving as a catalyst for an equalized society. The fact that three out of every ten children in Primary Seven in Uganda are unable to read and do basic numeracy of Primary Two standard indicates that a number of children exit primary education without having ever attained the basic competences, let alone skills to meaningfully contribute to personal, community and national development. There are also major differences in the quality of education and learning outcomes attained across regions and socio-economic groups within the country. As the global community moves to embrace new sustainable development goals on education, the findings of Uwezo assessment seem to imply that a 'one-size-fits all' education agenda, without a focus on what children learn in varied contexts, would be inadequate.

Introduction

Since 1997, providing primary education to all school age children in Uganda has received considerable attention. Success has been recorded in the area of access, with the numbers of children enrolled in primary education growing from 3,068,625 in 1996 to 5,303,564 in 1997 when Universal Primary Education (UPE) was first introduced in

Uganda, and to 8,459,720 million children in 2013 (MOES, 2015). Although a sizeable number of school age children are still out of school—variously estimated to be 18% by the latest Uganda National Household Survey (UNHS) (UBOS 2013/14) and 6% by the Ministry of Education and Sports (MOES, 2014a)—the debate is now steadily shifting from expanding access to improving learning.

It is generally agreed among education stakeholders in Uganda that the battle to achieve UPE will not be won until all children that enrol in Primary One complete the entire primary cycle on time and with satisfactory learning outcomes. In addition to the failure to register full net enrolment by 2015, other unfinished UPE business in Uganda includes high dropout rates and dismal learning outcomes. Recent data from Ministry of Education, Science, Technology and Sports and the Uganda National Examinations Board show that of the 1,897,114 million children who enrolled in Primary One in 2008, only 585,863 sat for the Primary Leaving Examination (PLE) in 2014 (approximately 31% completion rate). Furthermore, among the few students who completed Primary Seven and sat for the PLE, 68,760 (12%) failed (UNEB, 2015).

Poor learning outcomes at the end of the primary cycle in Uganda is a sign of poor learning registered at the lower levels of education. Previous assessments into primary education performance, including Uwezo 2011 and 2012, the World Bank Service Delivery Indicators (SDI) (World Bank, 2013) and the 2013/2014 Education for All Global Monitoring report (UNESCO, 2014), have all indicated dismal learning outcomes in basic literacy and numeracy.

While the findings indicate some success in achieving near gender parity in learning outcomes, which is consistent with findings from previous assessments, Uwezo survey results continue to show that a significant proportion of children complete Primary Seven without basic skills in literacy and numeracy (Uwezo, 2014). The most underperforming children come from the Eastern and northern parts of the country, belonging to parents with no or little education and without the socio-economic means to afford formal early childhood development education or private education for their children.

As the global sustainable development education agenda unites around the central goal of learning, Uganda must pay greater attention to enabling all school-age children irrespective of location, socio-economic status and gender to access education and attain at least the basic ability to read, write and count.

Methodology

Data for the Annual Learning Assessment on which this article is based were collected in August 2013 in 80 districts of the country, from the schools where the children studied as well as the communities and households in which they resided. Overall, 2,372 enumeration areas (EAs), 2,353 schools and 34,013 households were visited. In total, 87,339 children were assessed in literacy and numeracy.

The sampling frame from the 2002 Uganda Population and Housing Census (UPHC)

that was upgraded in 2007/08 from 56 to 80 districts was used. A representative sample of 48,000 households was drawn for the assessment using a two-stage stratified sampling design. In the first stage, 30 enumeration areas (EAs) were selected from each of the 80 districts using probability proportional to size, a sampling procedure where the selection probability for each EA was set to be proportional to the number of households within the EA. This implies that EAs with higher numbers of households had more chances of being selected. The second stage involved randomly selecting 20 households from each of the 30 EAs.

The survey targeted all children aged 6-16 years who regularly resided in the selected households, irrespective of whether they were attending school or not. As the assessment was done during school term time, children in boarding schools were excluded from the assessment. All children who regularly resided in the selected household (HH) who were aged 6-16 years were assessed in basic literacy and numeracy.

A carefully designed process of test development yielded four samples of tests with the same level of difficulty (i.e., Primary Two level) for literacy in English and numeracy. The test development process was done in collaboration with a group of test developers, which included primary school teachers, book authors and teacher educators, supported by experts from the National Curriculum Development Centre (NCDC). The Uganda Primary 2 curriculum was referenced in the development of these tests. Each test was extensively pre-tested (three times) in both rural and urban areas, and a full district pilot conducted to further validate the tests within a mock assessment process.

Table 1. presents the six levels of competency in English literacy used by the assessment: nothing, letter recognition, reading of words, reading of simple sentences forming a paragraph, reading a short story and comprehension of the story. During the administration of the tests, volunteers started with the letter level and would then proceed to the next level higher depending on the child's ability. Children who were unable to read letters/sounds of the alphabet were scored as 'nothing level'. Ability to fluently read words was gauged on ease and accuracy. At paragraph and story level, fluency was gauged on the child's ability to read sentences accurately rather than as a string of words. Comprehension ability was gauged on accuracy of the child to read the given story and correctly answer one or both of two questions given orally.

Table 1: Levels of competency for assessing literacy in English

Level	Competency	Description
Level 1	Nothing	The inability to recognize letters of the alphabet
Level 2	Letter	The ability to recognize letters of the alphabet
Level 3	Word	The ability to read common words
Level 4	Paragraph	The ability to read sentences
Level 5	Story	The ability to read a story of Primary 2 level
Level 6	Comprehension	The ability to read and make meaning of a story of Primary 2 level

The assessment of children's numeracy was based on seven levels of competency: nothing, counting of items symbolising the numbers 0-9, recognition of numbers 10-99, and four operations with whole numbers—addition, subtraction, multiplication and division. See **Table 2**. Children were first asked to attempt counting numbers from 0-9. The assessment then progressed to higher levels depending on the child's ability to complete each level. Children who were unable to count were scored as 'nothing level'.

Table 2: Levels of competency for assessing numeracy

Level	Competency	Description
Level 1	Nothing	The inability to count items symbolising numbers 0 to 9
Level 2	Counting 0-9	The ability to count items symbolising numbers 0 to 9
Level 3	Identify 10-99	The ability to recognize numbers 10 to 99
Level 4	Addition	The ability to solve at least two numerical written addition sums of Primary 2 level difficulty
Level 5	Subtraction	The ability to solve at least two numerical written subtraction sums of Primary 2 level difficulty
Level 6	Multiplication	The ability to solve at least two numerical written multiplication sums of Primary 2 level difficulty
Level 7	Division	The ability to solve at least two numerical written division problems of Primary 2 level difficulty

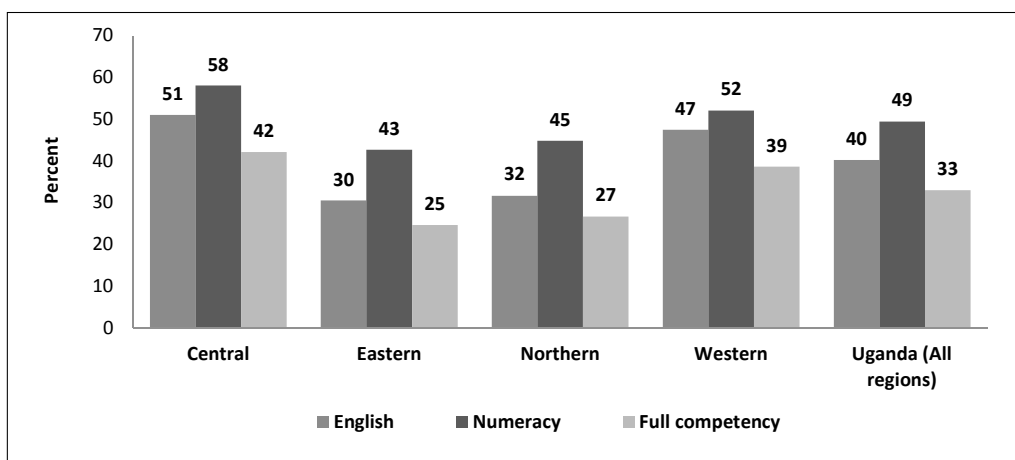
Findings: Is basic learning in Uganda equitable for all?

This section presents the 2013 national and regional findings on children's competencies in Primary Two level numeracy and literacy in English. The findings are for all grades of the primary cycle but with emphasis on Primary Three and Seven. By Primary Three, children are expected to have completed the Primary Two curriculum and should be able to perform Primary Two tasks with ease. By Primary Seven, the final grade of the primary education cycle in Uganda, children are expected to have no difficulty at all with Primary Two level work.

Regional inequity in English literacy and numeracy competencies

While learning outcomes were found to be low nationally, there were variations between regions. Pupils in the Central and Western regions recorded higher literacy and numeracy competencies than their counterparts in the Eastern and Northern regions. **Graph 1** below shows that the Central region had the highest proportion of Primary Three to Seven pupils assessed as fully competent in Primary Two level English literacy and numeracy while the Eastern region had the lowest proportion. Full competence in this article implies that a child is able to solve Primary Two problems up to division level and read and comprehend a Primary Two level story.

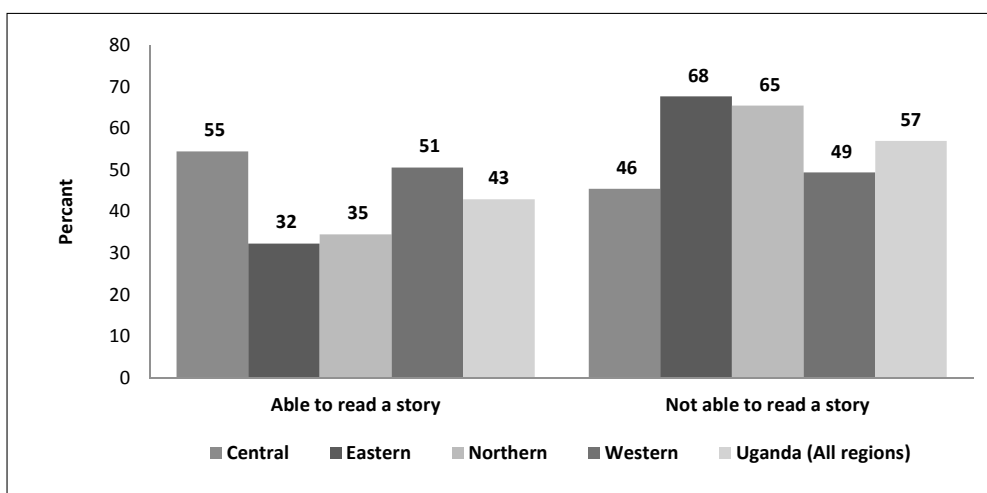
Graph 1: Percentage distribution of Primary Three-Seven pupils who were fully competent in English literacy and numeracy tasks at the Primary Two level, by region



The district data showed that 12 of the 20 lowest-ranked districts on full competency among Primary Three-Seven pupils are located in the Eastern Region, and eight districts are in the Northern Region.

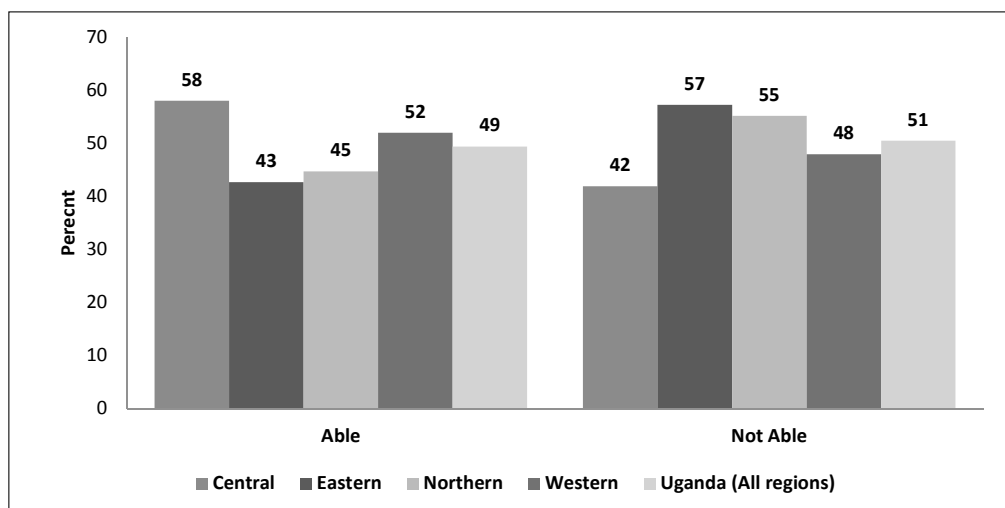
The data further shows that nationally four out of ten pupils (43%) in Primary Three to Primary Seven were able to read a Primary Two story (**Graph 2**). The Central region recorded the highest rate of English literacy at the Primary Two level (55%) while the Eastern region recorded the lowest rate (32%).

Graph 2: Percentage distribution of Primary Three-Seven pupils who were able / not able to read a Primary Two level story in English, by region



Major disparities were also found in rates of numeracy by region. **Graph 3** shows that the Central region had the highest proportion of Primary Three - Primary Seven pupils (58%) who successfully completed the numeracy tasks up to division level, compared with 43% of Primary 3 –Primary Seven pupils in the Eastern region.

Graph 3: Percentage distribution of Primary Three - Seven pupils who were able / not able to complete Primary Two level numeracy tasks, by region



The above are stark regional disparities in learning outcomes. The Central and Western regions displayed higher literacy and numeracy competencies than their counterparts in the Eastern and Northern regions. According to the Ministry of Finance, Planning and Economic Development – MFPED (2014, p.11), ‘the eastern and northern regions continue to lag behind with poverty levels above the national average’. Disparities in learning outcomes will further widen national inequalities. It would be challenging for the majority of youths in the already poorer regions of the north and east to become confident, enterprising, innovative and competent for employment nationally, regionally and globally when they are lacking even the basic skills.

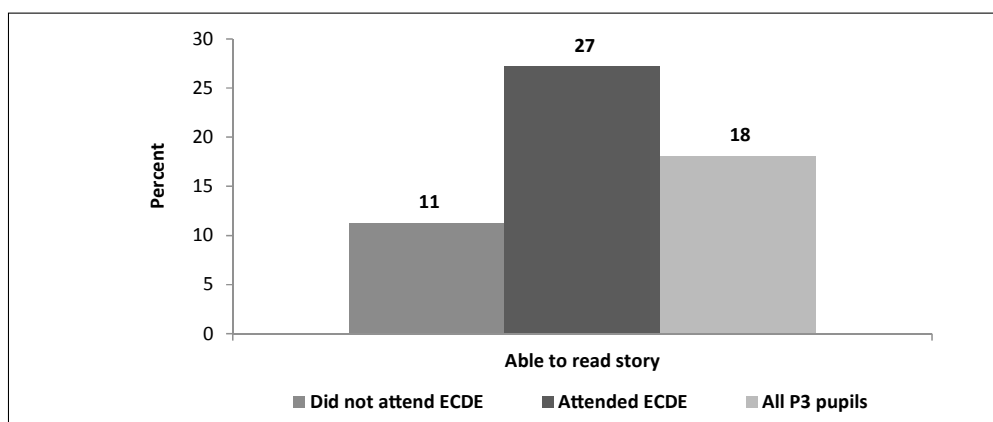
Inequity in access to Early Childhood Development Education widening gaps in learning outcomes

Despite the global call for expanding and improving comprehensive early childhood care and education, Uganda is still a long way from attaining this goal. According to Uwezo 2013 findings, only one in three of the Primary Three - Seven pupils assessed had attended some form of Early Childhood Development Education (ECDE).

Yet literacy and numeracy rates among pupils who had attended some form of ECDE were significantly higher than children who had not attended. For example, almost three out of ten pupils (27%) in Primary Three who had attended ECDE were able to read

a Primary Two level story, which was 2.5 times higher than the rate among their peers who had not attended ECDE (11%) (See Graph 4).

Graph 4: Percentage of Primary Three pupils who were able to read a Primary Two level story in English, by ECDE attendance



Similarly, the findings indicate that Primary Three children who had attended ECDE had higher rates of numeracy than their peers who hadn't attended ECDE. The numeracy rate among Primary Three pupils who had attended ECDE was 34% compared with 21% among Primary Three students who had not attended ECDE.

Uwezo findings are consistent with evidence in the literature the world over which asserts that ECDE matters as a foundation to learning (Sylva et al., 2010). ECDE provides a foundation for primary education and further learning. It is because of such evidence on the importance of ECDE that the suggested post 2015 sustainable development goal four on Ensuring inclusive and equitable quality education and lifelong learning opportunities for all has the provision of at least one year of free and compulsory ECDE as a core responsibility for every government.

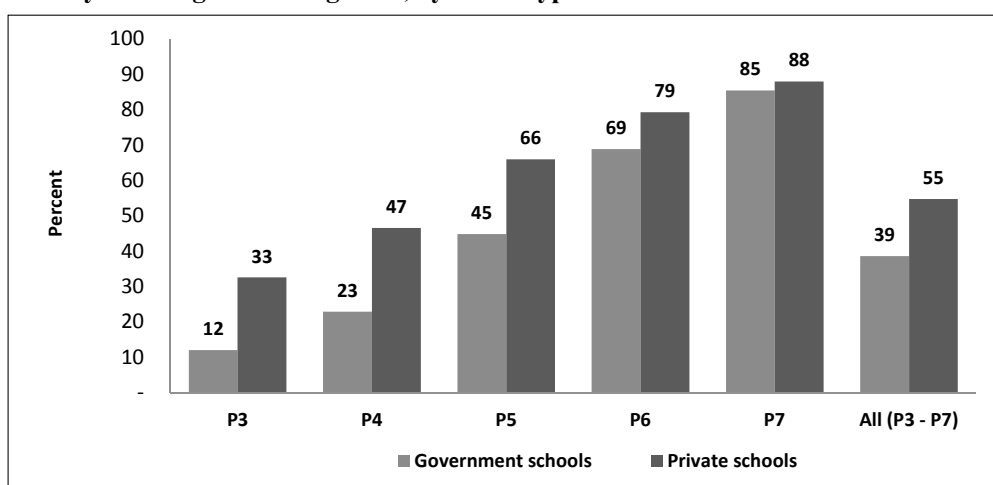
In Uganda it is high time that ECDE/nursery schools ceased to be a concern of only the private sector. Government ought to introduce ECDE centres in all primary schools (government-aided and private) throughout the country or else ECDE will only remain a commodity for the rich who can afford it, and leaving children of the poor masses excluded thereby widening gaps in learning outcomes and future employment opportunities. The positive trend is that the 2014 Education and Sports Sector Review recommended the introduction of an ECDE section in all public schools (MOES, 2014b). The hope is that this will be effectively implemented with a focus on learning for all groups beyond access.

Inequity in learning outcomes based on school type attended

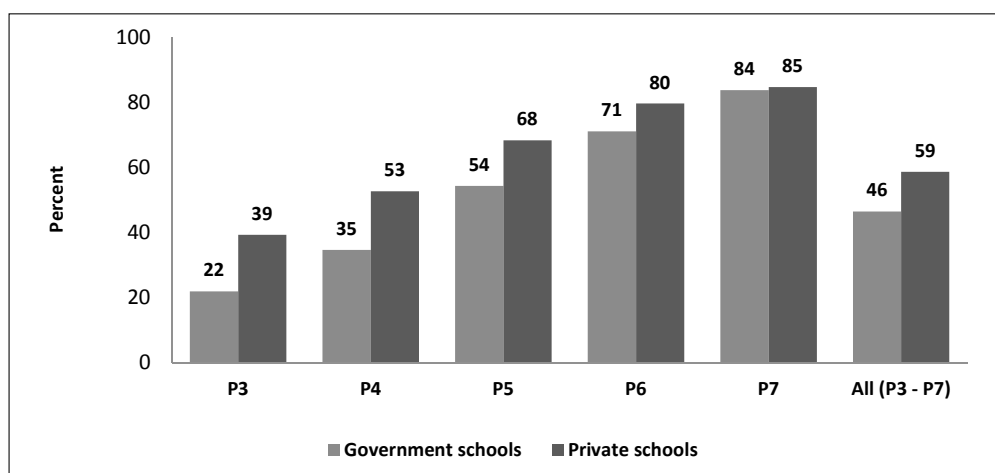
Pupils in private schools registered higher English literacy competencies than their

counterparts in government schools. Overall, the 2013 Uwezo survey assessed 57,680 pupils in government primary schools and 15,116 pupils in private schools. **Graph 5** shows that the rate of literacy among Primary Three to Primary Seven children who attended private schools was 55% compared with 39% for their peers in government schools. Notably, the literacy rate among Primary Three pupils in private schools (33%) was almost triple the rate among students in government schools (12%). But this literacy gap appears to close substantially by the end of primary school. The data seem to indicate that private school children get a good head start in that they are able to read earlier, while those in public schools gain these skills much later.

Graph 5: Percentage of Primary Three – Primary Seven pupils who were competent on Primary Two English reading tasks, by school type



Similar to proficiency in basic English literacy, rates of basic numeracy in private schools, particularly in early primary, were higher than in government schools. Overall, 59% of Primary Three to Seven pupils in private schools were competent on Primary Two level numeracy tasks compared with 46% enrolled in government schools (see **Graph 6**). Notably, twice the percentage of Primary Three pupils in private schools were able to complete the numeracy tasks compared with their peers in government schools (39% and 22%, respectively). This further indicates that private school children seem to gain a good head start compared with children in public schools. However, even in private schools, 15% of children in Primary Seven did not complete the numeracy assessment, compared with 16% of children attending government schools.

Graph 6: Percentage distribution of children who were competent in Primary Two numeracy tasks, by class and school type

The chilling differences in learning outcomes between private and government schools especially in foundational classes raises a fundamental question on how Ugandan schools can better serve the needs of all children – rich and poor and how quality education in Uganda can be accessed by all children (Moyi 2013, p.13).

Differences in literacy and numeracy learning outcomes based on mother's level of education

The higher the mother's level of education the more likely it was for their child to read a Primary Two level story and complete primary Two numeracy tasks. See **Table 3**. The percentage of Primary Three to Seven children who were able to read a Primary 2 level story increased from 36% among children of mothers with no formal education to 59% among children of mothers with secondary education to 80% among children of mothers with post-secondary education.

Table 3: Percentage distribution of competencies in English among Primary Three-Seven children, by mother's education level

Mother's level of education	Level of competence in English					
	Nothing	Letter	Word	Paragraph	Story	Total
None	8.2	19.5	21.6	14.4	36.3	100
Primary	6.4	16.5	18.9	14.7	43.5	100
Secondary	3.8	10.7	14.3	12.3	58.9	100
Post-secondary	0.8	2.6	7.1	10.0	79.6	100
Total	6.7	16.8	19.3	14.4	42.8	100

Similarly, the findings also indicated that three out of four (76%) pupils assessed in Primary Three to Seven with mothers who had attained post-secondary education were

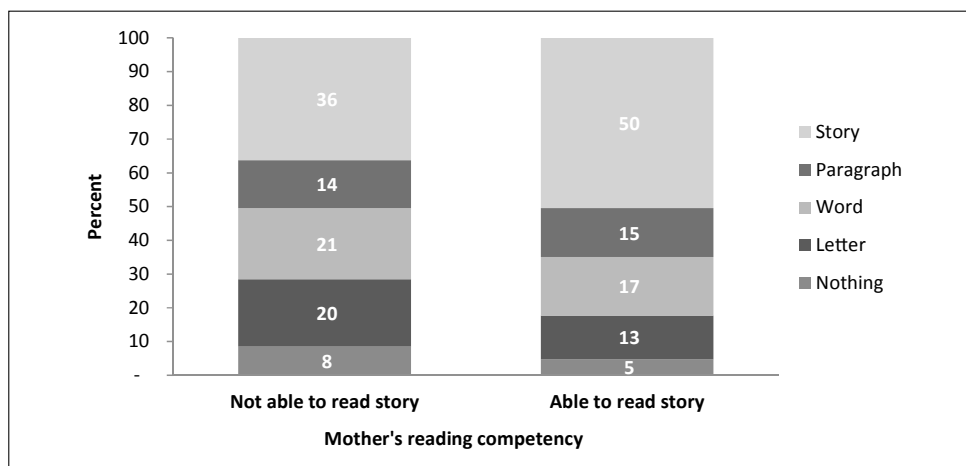
able to do Primary Two level numeracy tasks compared with four out of ten (43%) pupils with mothers who had no formal education. See **Table 4**.

Table 4: Percentage distribution of competencies in numeracy among Primary Three-Seven children, by mother's education level

Mother's level of education	Level of competence in numeracy						Division	Total
	Nothing	Counting 0-9	Numbers	Addition	Subtraction	Multiplication		
None	2.7	8.0	5.7	13.6	16.6	10.1	43.4	100
Primary	1.8	6.2	5.0	11.5	14.7	10.2	50.6	100
Secondary	1.3	4.1	4.2	9.2	12.0	10.3	58.8	100
Post-secondary	0.2	0.1	1.3	6.6	4.3	12.0	75.6	100
Total	2.0	6.5	5.1	11.9	15.0	10.2	49.3	100

Furthermore, there was a relationship between the mother's ability to read a Primary Two story and a child's ability to read. It was found that 50% of children in Primary Three to Seven with mothers who were able to read a Primary Two story were also able to read the story compared with 36% of children with mothers who were unable to read the story (See **Graph 7**).

Graph 7: Percentage distribution of Primary Three-Seven children's competencies in English literacy, by mother's ability to read a Primary Two level story



These results underscore the importance of mothers' literacy as a powerful influence on children's literacy. Unfortunately the majority of uneducated mothers are in rural poor communities of Uganda, yet these are the same people whose children are denied quality education as they can neither afford private education nor ECDE, hence inequality is

being dyed into the very fabric of Ugandan society.

Literacy and numeracy learning outcomes by socio-economic status

To examine the influence of socio-economic status, children's competencies in English literacy and numeracy tasks was cross-tabulated with data on the household's main source of lighting, which is one indicator of a household's socio-economic status. The better the main source of lighting for a household the more likely it was for children living in that household to read. This also implies that the poorer the household was (and therefore unable to afford better sources of light), the lower the literacy levels.

Table 5 indicates that almost seven out of ten pupils (68%) in Primary Three to Seven who lived in households that used electricity as the main source of lighting were able to read a Primary Two level story compared with just less than four out of ten pupils (39%) who lived in households that used paraffin as the main source of lighting.

Table 5: Percentage distribution of competencies among Primary Three - Primary Seven pupils in Primary Two level English literacy by main source of lighting in household

Household source of lighting	Level of competence in English					
	Nothing	Letter	Word	Paragraph	Story	Total
Paraffin	7.5	18.8	20.5	14.6	38.7	100
Gas	8.7	18.0	14.8	13.2	45.4	100
Solar	4.3	12.9	17.9	14.4	50.7	100
Electricity	1.7	5.5	11.2	13.9	67.7	100
Other	8.0	16.9	19.5	14.1	41.6	100
Total	6.7	16.8	19.2	14.5	43.0	100

Similarly, seven out of ten pupils (68%) assessed in Primary Three to Seven who lived in households that used electricity for lighting were able to do Primary Two numeracy tasks up to division level compared with less than five out of ten pupils (46%) who lived in households that used paraffin as the main source of lighting. See **Table 6**.

Table 6: Percentage distribution of competencies among Primary Three-Primary Seven pupils in Primary Two level numeracy tasks, by source of lighting in household

Source of lighting	Level of competence in numeracy							
	Nothing	Counting 0-9	Identify 10-99	Addition	Subtraction	Multiplication	Division	Total
Paraffin	2.2	7.2	5.6	12.4	15.9	10.5	46.2	100
Gas	1.0	7.4	8.8	16.7	9.5	8.6	48.0	100
Solar	1.5	4.4	3.9	9.3	14.0	11.5	55.5	100
Electricity	0.7	1.9	2.6	8.3	9.9	8.6	68.0	100
Other	2.4	7.6	4.6	11.8	15.1	10.1	48.3	100
Total	2.0	6.5	5.1	11.8	15.0	10.2	49.4	100

Conclusion

Successes have been recorded in getting the majority of children into primary school in Uganda. However, major inequalities exist in learning outcomes. There are major differences between government schools (where the majority of Uganda's poor children are enrolled) and private schools, particularly in the early formative years of primary education. The findings revealed that Primary Three pupils in private schools were almost three times more likely to read a Primary Two level story than their counterparts in government schools. The same disparity exists between children who had ECDE (children of parents who could afford to pay for ECDE) and those who did not have ECDE (mainly children of the poor). There are also stark regional disparities in learning outcomes - pupils in the richer Central and Western regions displayed higher literacy and numeracy competencies than their counterparts in the poorer Eastern and Northern regions.

Other socio-economic indicators that had a bearing on learning outcomes, but would need finer analysis than has been possible in this paper, are the mother's level of education and mother's ability to read. Children of mothers with secondary education and higher education displayed better literacy and numeracy skills than their counterparts who had mothers with primary education or no education at all. A mother's ability to read also seemed to be related to the child's ability to read. This implies that hand in hand with promoting children literacy, investments in adult literacy is also very important as it feeds into child literacy. Unfortunately according to the 2015 Education for All Global Monitoring Report adult literacy is one of the six Education for All goals that received the least attention in the last fifteen years (UNESCO, 2015). Clearly there are multiplier effects for supporting adult literacy so universal literacy of all age groups ought to be promoted.

As the world moves to embrace the new sustainable development goals nations such as Uganda need to ensure that all children, regardless of socio-economic status or location receive the education they need to realise their potential and lead fulfilling lives. Beyond policies and practices to get children into school, government and key education partners need to also prioritise policies and practices that guarantee learning for every child. To eliminate inequality in learning by 2030, 'country plans need to include specific targets so that education participation and learning can be monitored for individual population groups' (UNESCO, 2014, p.8). This would necessarily require independent efforts to monitor the progress made towards achieving each goal at least once every two years.

There is also need to research into and learn from successful practices that have worked in the previous decade. Even though learning outcomes are low nationally in Uganda, there are still pockets of successful learning taking place among different population groups. Such success stories need to be identified, carefully studied and unique practices tried out and tested for their scalability.

Finally, the fundamental responsibility for ensuring equitable learning in Uganda lies with government. Addressing the issue of low learning outcomes nationally and

across socio-economic groups needs greater attention. Government ought to ensure that public schools are well positioned to promote learning for all children. There is need to get qualified teachers who are motivated to teach well in all schools. Government will also need to ensure that each child who goes into primary education is ready for learning by providing mandatory pre-school education.

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